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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,155	03/29/2004	Keisuke Inoue	SCEI 3.0-200	2941

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EXAMINER

STOYNOV, STEFAN

ART UNIT	PAPER NUMBER
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2116

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/812,155	Applicant(s) INOUE, KEISUKE	
	Examiner Stefan Stojnov	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 and 20-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-19 and 37-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/25/04, 5/8/06, and 5/22/06</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Applicant's election of Species V in the reply filed on 10/16/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicant's clarification regarding Species II is acknowledged (i.e. Species II includes claims 5-8).

Specification

The disclosure is objected to because of the following informalities:

On page 1, paragraph 0001, line 2, the Serial Number for the related co-pending application is missing.

Appropriate correction is required.

Claim Objections

Claims 18, 40, and 42 are objected to because of the following informalities:

In claim 42, line 2, replacing the word "the" with "a" before the first occurrence of the limitation "sub-processing unit" is suggested in order to avoid lack of antecedent basis for this limitation in the claim.

Similarly, in claims 18 and 40, lines 4 and 5, the word "queues" has to be replaced with "queue".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2116

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 15-17, 37-39, and 42-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Greene, US Patent No. 6,775,787. Greene shows the claim limitations in Figures 1-4.

Regarding claims 15 and 37, Greene discloses a processing system for processing operations associated with thermal attributes and a processing apparatus for processing operations, comprising:

a first operation having a first thermal attribute exceeding an operating threshold (column 6, lines 52-57, column 6, line 61 – column 7, line 7, lines 32-36, column 8, lines 34-49);

a second operation, having a second thermal attribute not exceeding an operating threshold (column 6, lines 52-57, column 6, line 61 – column 7, line 7, lines 32-36, lines 43-63);
and

a processor for executing the first and the second operations (column 3, line 64 – column 4, line 5, FIG. 2), the processor having a thermal threshold (column 5, line 65 – column 6, line 15, column 7, lines 32-36);

wherein, if the thermal threshold of the processor is not exceeded, the processor selects the first operation for processing (column 7, lines 43-63, column 8, lines 20-43), and

if the thermal threshold of the processor is exceeded, the processor selects the second operation for processing (column 8, line 44 – column 9, line 20).

Regarding claims 16 and 38, Greene further discloses the system and apparatus, wherein, if the thermal threshold is not exceeded, and if the first operation is not available, then

Art Unit: 2116

the processor is operable to obtain and execute the second operation (column 7, line 63 – column 8, line 13).

Regarding claims 17 and 39, Greene further discloses the system and apparatus as per claims 16 and 38, wherein, if the second operation is not available, then the processor is operable to idle for a predetermined period of time (column 8, lines 14-19).

Regarding claim 42, Greene further discloses the apparatus, wherein the processor comprises a sub-processing unit, and the sub-processing unit includes a floating point unit, and integer unit and a register associated with the floating point unit and the integer unit (column 4, line 62 – column 5, line 4).

Regarding claim 43, Greene further discloses the apparatus as per claim 42, wherein the sub-processing unit further includes a local store (column 5, lines 4-11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2116

Claims 18, 19, 40, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greene, US Patent No. 6,775,787 in view of Sunakawa et al. US Patent No. 5,828,568. Sunakawa shows the claim limitations in Figures 1-26).

Regarding claims 18 and 40, Greene discloses the system and apparatus as per claims 15 and 37, respectively.

Greene fails to disclose a plurality of priority queues, each of the priority queues including a first queue and a second queue, the first queue for storing the first operation and the second queue for storing the second operation.

Sunakawa teaches a plurality of queues with different priority levels, queuing tasks, further used for scheduling the task execution (column 9, lines 35-37, lines 40-53). In Sunakawa, the above-described apparatus and method, similar to applicant's invention, provide for changing the execution priority of a task in correspondence with the consumption power of a device used by the task. Therefore, as the device requires a larger consumption power, it can enter power-savings control earlier (column 11, lines 26-30). Thus, the overall consumption power is saved without lowering operability column 11, line 30-32).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the plurality of priority queues, storing tasks for further execution in consideration with the device power consumption, as suggested by Sunakawa with the system and apparatus disclosed by Greene in order to implement a plurality of priority queues, each of the priority queues including a first queue and a second queue, the first queue for storing the first operation and the second queue for storing the second operation. One of ordinary skill in the art would be motivated to do so in order to save the overall power consumption without lowering the system operability.

Art Unit: 2116


Regarding claims 19 and 41, Sunakawa further teaches the system an apparatus as per claims 18 and 40, respectively, wherein a first one of the priority queues is a high priority queue, a second one of the priority queues is a medium priority queue, and a third one of the priority queues is a low priority queue (column 9, lines 40-47, FIG. 6).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Stoykov whose telephone number is (571) 272-4236. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS



REHANA PERVEEN
SUPERVISORY PATENT EXAMINER
12/26/06